

**STACKPOLE & FRENCH  
ATTORNEYS AT LAW**

DAVID B. STACKPOLE  
EDWARD B. FRENCH, JR.

P.O. BOX 819, 255 MAPLE STREET  
STOWE, VERMONT 05672

TEL. (802) 253-7339

FAX (802) 253-7330

-----  
JENNIFER B. COLIN  
JEREMY D. HOFF

-----  
info@stackpolefrench.com

March 22, 2011

Via Hand Delivery and Electronic Mail

Susan M. Hudson, Clerk  
Vermont Public Service Board  
Chittenden Bank Building, Fourth Floor  
112 State Street, Drawer 20  
Montpelier, VT 05620

Re: Joint Petition of GMP, VEC and VELCO for Certificate of Public Good, pursuant to 30 V.S.A. §248, to Construct up to a 63 MW wind electric generation facility and associated facilities, on Lowell Mountain, in Lowell, Vermont, and the installation and upgrade of approximately 16.9 miles of transmission line and associated sub-stations in Lowell, Westfield and Jay, Vermont – Docket No. 7628


Dear Ms. Hudson:

Enclosed please find the original and eight (8) copies of the Proposed Findings of Fact and Brief of Dyer-Dunn, Inc. with attachments. The Proposed Findings of Fact and Brief of Dyer-Dunn, Inc. that was filed yesterday had an incorrect header on all of the pages. The changes made in this Brief are to correct those headers.

Thank you.

Sincerely,

STACKPOLE & FRENCH LAW OFFICES



David B. Stackpole, Esq.  
on behalf of Dyer-Dunn, Inc.

DBS/krq

cc: Service List

PSB Docket No. 7628 – SERVICE LIST

Geoffrey Commons, Esq.  
John Beling, Esq.  
Vermont Department of Public Service  
112 State Street  
Montpelier, VT 05620-2601  
[geoff.common@state.vt.us](mailto:geoff.common@state.vt.us)  
[john.beling@state.vt.us](mailto:john.beling@state.vt.us)

(For Green Mountain Power Corporation)

Peter H. Zamore, Esq.  
Benjamin Marks, Esq.  
Sheehey Furlong & Behm, P.C.  
30 Main Street – P.O. Box 66  
Burlington, VT 05402  
[pzamore@sheeheyvt.com](mailto:pzamore@sheeheyvt.com)  
[bmmarks@sheeheyvt.com](mailto:bmmarks@sheeheyvt.com)

Donald J. Rendall, Jr., Esq.  
Green Mountain Power Corporation  
163 Acorn Lane  
Colchester, VT 05446  
[rendall@greenmountainpower.com](mailto:rendall@greenmountainpower.com)

(For Vermont Electric Cooperative, Inc.)

Victoria J. Brown, Esq.  
Joslyn Wilschek, Esq.  
Primmer Piper Eggleston & Cramer PC  
150 South Champlain Street – P.O. Box 1489  
Burlington, VT 05402-1489  
[vbrown@ppeclaw.com](mailto:vbrown@ppeclaw.com)  
[jwilschek@ppeclaw.com](mailto:jwilschek@ppeclaw.com)

(For VELCO and Vermont Transco)

S. Mark Sciarrotta, Esq.  
Vermont Electric Power Company, Inc.  
366 Pinnacle Ridge Road  
Rutland, VT 05701  
[msciarrotta@velco.com](mailto:msciarrotta@velco.com)

Judith Dillon, Esq.  
Vermont Agency of Natural Resources  
103 South Main Street  
3<sup>rd</sup> Floor Center Building  
Waterbury, VT 05671  
[judith.dillon@state.vt.us](mailto:judith.dillon@state.vt.us)

James A. Dumont, Esq.  
Law Offices of James A. Dumont, Esq., P.C.  
15 Main Street  
Bristol, VT 05443  
[dumont@gmavt.net](mailto:dumont@gmavt.net)

Richard H. Saudek, Esq.  
Cheney, Brock & Saudek, P.C.  
159 State Street  
Montpelier, VT 05602  
[rsaudek@cbs-law.com](mailto:rsaudek@cbs-law.com)

(For the Town of Lowell)

Saundra Levine, Esq.  
Conservation Law Foundation  
15 East State Street, Suite 4  
Montpelier, VT 05602-3010  
[slevine@clf.org](mailto:slevine@clf.org)

Gerald R. Tarrant, Esq.  
Tarrant, Gillies, Merriman & Richardson  
P.O. Box 1440  
Montpelier, VT 05601-1440  
[gtarrant@tmgvt.com](mailto:gtarrant@tmgvt.com)

(For Green Mountain Club)

Morris L. Silver, Esq.  
The Kellogg Farm  
Stage Road, P.O. Box 606  
Benson, VT 05731-0606  
[mlsilver@sover.net](mailto:mlsilver@sover.net)

Melissa Stevens  
Central Vermont Public Service Corporation  
77 Grove Street  
Rutland, VT 05701  
[mstevens@cvps.com](mailto:mstevens@cvps.com)

Bruce Urie, Chair  
Jim Jones, Selectman  
Craftsbury Selectboard  
P.O. Box 55  
Craftsbury, VT 05826  
[craftsbury@gmail.com](mailto:craftsbury@gmail.com)  
[bruce@vlt.org](mailto:bruce@vlt.org)

Michael Nelson  
Town of Albany  
P.O. Box 240  
Albany, VT 05820  
[vermont8@hotmail.com](mailto:vermont8@hotmail.com)

Nancy Warner, President  
Lowell Mountains Group, Inc.  
Box 159  
Lowell, Vermont 05847  
[nwarner@oevna.org](mailto:nwarner@oevna.org)

Milo and Bonnie Day  
606 Farm Road  
Lowell, VT 05847  
[milo@dishmail.net](mailto:milo@dishmail.net)  
[spiknit@gmail.com](mailto:spiknit@gmail.com)

Donald and Shirley Nelson  
P.O. Box 192  
Albany, VT 05820  
[ds-nelson@peoplepc.com](mailto:ds-nelson@peoplepc.com)

Jack Brooks  
P.O. Box 305  
Albany, VT 05820  
[cyrusandethan@yahoo.com](mailto:cyrusandethan@yahoo.com)

Steve E. Wright  
P.O. Box 81  
Craftsbury Common, VT 05827  
[salmo@vtlink.net](mailto:salmo@vtlink.net)

Kevin McGrath  
P.O. Box 74  
Lowell, VT 05847  
[kmcgrath@together.net](mailto:kmcgrath@together.net)

Jared M. Margolis, Esq.  
243 Cilley Hill  
Jericho, VT 05465  
[jaredmargolis@hotmail.com](mailto:jaredmargolis@hotmail.com)

Brice Simon, Esq.  
P.O. Box 240  
Stowe, VT 05672  
[bricesimon@stoweattorneys.com](mailto:bricesimon@stoweattorneys.com)

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Joint Petition of Green Mountain Power Corporation, )  
Vermont Electric Cooperative, Inc., Vermont Electric )  
Power Company, Inc., and Vermont Transco LLC, )  
for a Certificate of Public Good, pursuant to 30 V.S.A. )  
Section 248, for authority to construct up to a 63 MW )  
wind electric generation facility and associated facilities )  
on Lowell Mountain in Lowell, Vermont, and the )  
installation or upgrade of approximately 16.9 miles of )  
transmission line and associated substations in Lowell, )  
Westfield and Jay, Vermont. )

Docket No. 7628

**PROPOSED FINDINGS OF FACT AND BRIEF OF**  
**DYER-DUNN, INC.**

**INTRODUCTION**

Petitioners seek a Certificate of Public Good ("CPG") allowing construction of a wind generation facility in Lowell, Vermont to be built and operated by Green Mountain Power Corporation ("GMP".)

Dyer-Dunn, Inc. ("D-D, Inc.") filed a Motion to Intervene on August 13, 2010. The Public Service Board ("PSB") granted intervention status to D-D, Inc. set forth in its Order of September 13, 2010 as follows: "We grant Dyer-Dunn's motion with respect to orderly development and economic impact, but limited to Project impacts to Dyer-Dunn's property value as it relates to regional property values generally. We also grant Dyer-Dunn's motion with respect to aesthetics and noise, but limited to impacts to the property it owns, and water purity and quality with respect to the spring fed stream that serves the cabin on the property."

**Noise and Aesthetics**

D-D, Inc. property is a 274 acre parcel of land in the town of Lowell, Vermont.  
(D-D, Inc. Direct, pg.1 lines 4-5.)

A vacation cabin is located on the D-D, Inc. parcel. (D-D, Inc. Direct, pg.3 line 16.)

The project as proposed, sites the turbine closest to D-D, Inc. property line at a distance of 1,780 feet (+/- 100 feet) and at a distance of 2,118 (+/- 100 feet) from the vacation cabin. (March 10, 2011 ltr from Zamore to Hudson, pg.2, paragraph 6.)

Aesthetic concerns of D-D, Inc., at its property, are the beauties of nature, of quiet enjoyment of its location on the Lowell Mountain Range, the woods, the sounds of nature. Aesthetics is appreciation of beauty. Being on the property is an aesthetic experience. Noise is a pollutant. This is generally the case where ever sound rises to the level of being noise. The changes to the Lowell Mountains proposed for this development produces noise pollution, and visual intrusions, that will erode the traditional charm of the D-D, Inc. property. (D-D, Inc. Direct pg.4, lines 19-21 and pg. 5, lines 1-9.

D-D, Inc. incorporates and adopts the submissions by Bonnie Day in her March 21, 2011 filing under the title "Proposed Findings of Fact and Brief of Bonnie Day," as follows:

As to the pre-existing background and the health effects of noise, paragraphs 1 through 12.

As to noise standards, paragraphs 1 through 19.

As to low frequency sound, paragraphs 1 through 5.

As to sound monitoring, paragraphs 1 through 4.

As to setbacks, paragraphs 1 through 7. Further included are here conclusions of law as to noise and the related health effects. See appropriate pages attached as Exhibit A.

**Proposed Findings and/or Conclusions of Law as to Noise and Aesthetics**

Noise from site alterations, turbine construction and operation of the turbines, will have an undue adverse effect on aesthetics at the Dyer-Dunn, Inc. property. (D-D, Inc. Direct, pg.4, lines 15-17.)

**Water Purity and Quality at D-D, Inc. Property**

The water source for the D-D, Inc. cabin is a spring fed tributary stream of Truland Brook, which runs across the D-D, Inc. parcel in close proximity to the cabin site, one of the identified head-waters of the Missiquoi River. The stream originates in springs on land leased to the Petitioners by either or both the Mygatt or Wileman families which land will be subjected to major blasting for the construction of the tower bases, and ridge line road. (D-D, Inc. Direct, pg.3, lines 16-21 and pg.4, lines 1-9.)

**Conclusion and Proposed Permit Condition**

Although the effect on the Missiquoi water shed by the project as proposed may be great, D-D, Inc. does not contend that its stream water source is significant other than to the use and enjoyment of its cabin. In the event the PSB should issue a CPG for the

project, it should be subject to conditions that protect the stream water source, both as to potability and flow.

### **Orderly Development of the Region**

Petitioner seeks to avoid the spirit of the regional plan and the Lowell Municipal Plan by pointing out that they do not refer to specific points that should be the subject of protection. Regional and municipal planning and the resulting plans were prepared from forms assembled by regional commissions with no knowledge that to achieve the desired result of preserving and enhancing the areas served, required the specific identification of cherished areas within their bounds. They were written with the understanding of the Act 250 process where their more general nature was sufficient.

### **Proposed Finding as to Orderly Development**

Twenty-one wind turbines, approximately 450 feet in height sited along 3 ½ miles of rural mountain ridge line are not orderly development do not constitute orderly development as a region.

### **Economic Impact**

The concept of economic benefit to the State and its residents raises a question as to what it is meant as economic benefit. One might say that the creation of a hand full of jobs, the sale of more merchandise by convenient stores, and the temporary employment of construction workers is an economic benefit. It could be argued that the Phish concert a few years back in Orleans County was a great economic benefit even though it was for three or four days.



The Public Service Board has an obligation that goes far beyond these quick infusions when considering economic benefit to the State and its residents. The Supreme Court has stated that PSB is quasi-legislative, as well as quasi-judicial. Further, the Supreme Court is very reluctant to review the work the PSB in its deliberations. These combined circumstances places the responsibility for the maintenance of the precious Vermont image on the shoulders of the PSB.

Can anyone justly conclude that the destruction of the Vermont Mountains for projects of limited duration is an economic benefit when weight against the potential for orderly development that over the years will add significantly to the property tax base and the requirement for services in all of the fields associated with an increase of numbers of people who should have enhanced purchasing power and the skills needed for whatever development opportunities will arise.

**Finding and/or Conclusion as to Economic Benefit**

The project will not result in an economic benefit to the state and its residents.

**Due Process of Law**

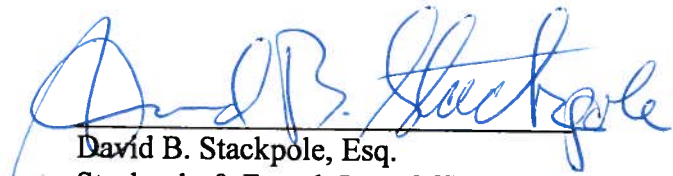
D-D, Inc. raises the issue that the Act 248 process, as it has evolved, gives rise to serious questions relating to the Constitutional Rights of the people of Vermont. Act 248 as currently implemented, invests the PSB with both legislative and administrative power. The Board is quasi-judicial in nature, but the Supreme Court is reluctant to examine their processes.

It appears there are only limited provisions for the protection of the ordinary citizens constitutional rights.

I refer to the 14<sup>th</sup> Amendment of the U.S. Constitution and Articles First and Second of the Vermont Constitution as they define property rights and Chapter 2, Section 5 of the Vermont Constitution "the Legislative, Executive and Judiciary departments shall be separate and distinct so that neither exercise the powers properly belonging to the others." Although, some blending is acceptable, the challenge is to assure the people that they are being fairly dealt with in what is an overwhelming process for individuals seeking to protect their property rights.

DATED at Stowe, Vermont this 21<sup>st</sup> day of March, 2011.

DYER-DUNN, INC.



David B. Stackpole, Esq.  
Stackpole & French Law Offices  
P.O. Box 819  
Stowe, VT 05672  
(802) 253-7339

**EXHIBIT A**

**STATE OF VERMONT  
PUBLIC SERVICE BOARD**

Joint Petition of Green Mountain Power Corporation,	)	
Vermont Electric Cooperative, Inc., Vermont Electric	)	March 21, 2011
Power Company, Inc., and Vermont Transco LLC,	)	
for a Certificate of Public Good, pursuant to 30 V.S.A.	)	Docket No. 7628
Section 248, for authority to construct up to a 63 MW	)	
wind electric generation facility and associated facilities	)	
on Lowell Mountain in Lowell, Vermont, and the	)	
installation or upgrade of approximately 16.9 miles of	)	
transmission line and associated substations in Lowell,	)	
Westfield and Jay, Vermont.	)	

**PROPOSED FINDINGS OF FACT AND BRIEF OF BONNIE DAY**

1. Ms. Day incorporates the findings of facts and conclusions of law found in LMG's brief and emphasize the following facts.

**GMP's PROPOSED PROJECT WILL CAUSE AN UNDUE ADVERSE EFFECT ON  
HEALTH AND ON SAFETY**

**FINDINGS OF FACT:**

*The pre-existing background and the health effects of noise:*

1. There is no number that should be used as a "cut off" regarding how many people should be protected. (Kane Testimony Feb.9 p.73).
2. What I'm saying there is that we have a community where even under the strictest interpretation of WHO's nighttime guidelines people are safe. They have healthful sleep. It would seem inappropriate to change that without their consent or any compensation. (James NT 2/23/11, p 41)

3. The level of noise is going to be more perceptible in a place where there are only sounds of nature than it would be in a place like Manhattan where there's a lot of other background noise. (McCunney NT 2/10/11, p 109)
4. "[W]ind turbines are often more noisy at night. They are often placed in rural areas with low background noises where they will be perceived more clearly." (Lovko NT 2/23/11 p.86).
5. First do no harm. (McCunney NT 2/10/11, p 155)
6. We need to be more cautious, and so I'm basing my opinion on the precautionary principle, which is if you do not know what the health effects are going to be, you err on the side of caution. (James NT 2/23/11, p 12)
7. There's a lot of information out there that says there are issues going on and that needs to be kept in mind. (Lovko, NT 2/23/2011 p 88)
8. There's no question there are people who are troubled by the noise levels associated with wind turbines. (McCunney NT 2/10/11, p 63)
9. Landowners have legitimate concerns about noise that need to be addressed. (Pion NT 2/4/11 p. 57)
10. One of the major mechanisms (of health effects) that have been proposed is protracted annoyance from prolonged exposure to low levels of noise, which may undermine coping and progress to stress related effects. (McCunney NT 2/10/11, p 21)
11. Noise disturbs sleep patterns. I have no doubt whatsoever some people may be affected in terms of their sleep by noise. This is important because sleep deprivation is a serious medical concern. (McCunney NT 2/10/11, p 55)
12. Petitioner's noise modeling is inadequate. The most critical factor to address is to establish a standard protective of human health and that avoids undue adverse impacts as a result of annoyance. (Kane Exh DPS MK 2 p.22).

*Noise standards:*

1. The Board should be considering a standard that would be protective of REM sleep. (James NT 2/23/11, p 39)
2. The noise level should be kept to 30 decibels in the bedroom to be protective of sleep. (Irwin, NT 2/24/2011 p 55)
3. The Board should impose a standard that protects people from experiencing more than 30 decibels in their bedroom. (Irwin, NT 2/24/2011 p 58)

4. Medical sleep specialists have indicated that human sleep is disturbed and changes from important deeper levels, when noise levels increase from 30 dBA to 35 dBA inside a room where someone is sleeping. (James NT 2/23/11, p 40)
5. The proposed standard for preventing any kind of health effects is 30-dBA exterior night. That is a standard that I'm recommending the Board consider. (James NT 2/23/11, p 12)
6. Actually the 30 dBA is the criteria you would have to use if you want to protect against any adverse health effect. A maximum 35 dBA LEQ exterior façade allows for some sleep disturbance, and I think that is a good reasonable split between some protections under the 40, a little bit of safety factor, without getting so extreme that it prevents wind turbines from being put in anywhere. (James NT 2/23/11, p 47)
7. The WHO 2009 report indicates that 35-dBA night outside is a threshold that it cites for complaints associated with nighttime noise. (Blomberg NT 2/22/11, p 240)
8. If we're going to design a bridge, do we design the bridge so that it's right at the point where it might fall down? When we're designing something for a community, do we design the wind turbine project so it is right at the brink of causing adverse health effects? I prefer to err on the side of caution and provide a safety factor. (James NT 2/23/11, p 44)
9. Annoyance from wind turbine noise has been reported at 40 decibels or lower. (McCunney NT 2/10/11, p 99) At about 35 to 37 decibels five percent of people report being annoyed. As you go higher, greater than 40 decibels, about 15 percent report being annoyed. (McCunney NT 2/10/11, p 52)
10. Based on all my research and knowledge on the topic (of wind turbine noise) it is my opinion, speaking for myself and not on behalf of the industry that I would want the standard, if it was my home involved, that the noise should be kept below 35 decibels, maybe 40 outside my home. (McCunney NT 2/10/11, p 103+105)
11. The level that is recommended is that it **be no more than 40 on the exterior facade on the home** and that it would therefore provide for protection for those who are sleeping in the home. There's a possibility at a wind turbine facility that you could have sound levels that exist that are in the 35 to 40 decibel range and the protection should be provided so that people do not experience those inside their home where they are sleeping. (Irwin, NT 2/24/2011 p 60)
12. When noise problems happen it's when the noise is not reciprocal. That's exactly what we have here. This is a situation where the person who is sleeping or even having a party, will never interfere with the wind turbines. But the noise of the wind turbines can interfere with the activities of people nearby. It is that lack of reciprocity that's really central to the potential for problems. (Blomberg NT 2/22/11, p 266)
13. Noise standard using averaging can exceed the standard for some portion of time without being out of compliance. (Kane NT 2/9/11, p.60)

14. I presume that the established standard is protective of public health, but we have no objective evidence. (Kane NT 2/9/11, p.65)
15. When you use a noise standard that is averaged over time noise from the project can exceed that amount for a period of time and the noise standard can still be met. (McCunney NT 2/10/11, p 90)
16. If there is a great disparity between the numbers that could result in a high and low numbers, that could result in significant times that are exceeding the standard. (Kane NT 2/9/11, p.63)
17. Theoretically under the Board's standard (that they have used in the past) you could have sound at twice the amount of 45 decibels for certain periods of time, and if the rest of the time the noise was below 45 the noise standard could still be met. (McCunney NT 2/10/11, p 90)
18. With the currently utilized method of averaging for a noise standard, the noise level could be as high as 55 decibels, twice as loud as 45 decibels for some period of time and the 45 decibel standard would be met. (Kane NT 2/9/11 pp.62-63). The longer the time over which the average, the less stringent the standard- it allows the noise limit to be exceeded even longer. (Kane 2/9/11 p.59).
19. At a sound level of 45, if half the time it's zero and half the time it's 90 it still meets 45. (McCunney NT 2/10/11, p 142)

*Low frequency sound:*

1. In 1999 WHO stated that when there's a dominance of low frequency sound that adverse health effects are a serious concern, and this seems to be continuously overlooked when people talk about the WHO documents. (James NT 2/23/2011 p 55-56)
2. Infrasound, below 20 Hz is below normal human hearing. There are rare examples where people may have the ability to perceive infrasound. Most people, if they perceive it, are actually feeling it as a vibration. It is worthy of note that these lower frequency sounds travel fairly far. A low frequency sound that is not audible within 100 feet of its point of origin may become audible when it hits a structure and causes vibrations within that structure. (McCunney NT 2/10/11, p 114)
3. Wind turbines have the dominant -- the point at which the primary acoustic energy is focused is between zero Hz and about 20 Hz. So much so that if you are to eliminate all the rest of the frequencies you would probably get the same measurement as long as you're using dBC. In any kind of rotating machine the dominant energy that's what's called the blade passage frequency, and that's the rotational speed of the hub times the number of blades converted to cycles per seconds. For a wind turbine that is one cycle

per second, and that is where the peak energy occurs, but because all of the acoustic data for wind turbines stops at about 63 Hz we never see that. (James NT 2/23/2011 p 56)

4. In fact some low frequency sound complaints prove impossible to resolve. Low frequency sound all night long would be annoying and interfere with people's sleep. Those effects are the types of effects that people living in the vicinity of the proposed project may experience. (McCunney NT 2/10/11, p 126)
5. GMP's Noise expert performed no analysis of low frequency or infrasound. (See Blomberg PFT p.24 (no modeling was performed below 31 Hz. *See also* McCunney NT 2/10/11 p.35- stating that it is wise to test for all frequencies including infrasound.).

*Sound monitoring:*

1. In addition to GMP's lack of analysis of low frequency and infrasound, he did not follow WNSI standards for monitoring: for example, he did not exclude short duration events, from his data even though they can significantly skew the existing background levels in favor of the developer. (Blomberg PFT pp17-21)
2. In the sound monitoring plan, I think it's wise to check all frequencies, including infrasound. (McCunney NT 2/10/11, p 35)
3. High (sound) levels may be due to such unusual events as snow storm, nearby brush and tree cutting, snow plowing, wet roads, utility trucks, etc that were operating nearby when monitoring was taking place and are not typical of background noise levels in this area. (ALB-Cross 9, Kaleski testimony in Sheffield, pg 3)
4. It is not appropriate to eliminate from my dataset short-duration events like car pass-bys, dogs barking, aircraft flyovers or wind rustling in the leaves. (Kaleski PFT, p 8)

*Setbacks:*

1. You can use distance as a surrogate for noise level, and that's one reason why setbacks are really key, is that you can use distance, and it can be your first line of defense too -- because other mechanisms such as monitoring are different, difficult, and cumbersome, and in cases like Vinalhaven, where they have been arguing for it seems like forever, what even the numbers are, they can't even agree what the noise levels are. You can avoid a lot of those problems if you just set a decent setback and use distance as your criteria. (Blomberg, NT 2/22/2011, pg 273)
2. In Maine, noise levels are measured at the boundary of the property owned by the developer. (McCunney NT 2/10/11, p 166) In fact, almost every noise regulation in this country is at the property line. (Blomberg NT 2/22/11, p 257)



3. Focusing on the residence instead of the property line is a defacto granting of a noise pollution easement to GMP without the consent of the property owner. (Blomberg ST, p 9+10).
4. The standard at the property line is appropriate because otherwise neighbors are losing the use of their land that is being used as a buffer without compensation. (Blomberg NT 2/22/11, p 245)
5. Take Mr. Nelson, for example, he's not moving to a nuisance. He owns that property. It's his property. He has a right to use it as he wishes within legal limits. Legal authority for property rights? It's kind of a basic to the foundation of our society. (Blumberg NT 2/22/11, p 256)
6. The standard in Lowell is that windmills are conditional use in this zoning district. In a conditional use the character of the neighborhood is critical, and character of the neighborhood would require a property line and not an at-the-home standard. (Blomberg NT 2/22/11, p 247)
7. GMP claims that they are good neighbors; good neighbors keep the noise to themselves. (See Blomberg NT 2/22/11, p 250)

#### CONCLUSIONS OF LAW:

The testimony in this case, combined with the scientific evidence, shows the very real impacts of turbine noise on human health and well-being. The constantly evolving science is revealing more severe effects than previously thought. The location where GMP wants to build these 21 459 foot industrial turbines is a quiet, rural area with no sound anything like what the turbines will impose. Experts in this case agree that human health must be protected and that the health concerns raised regarding turbine noise are legitimate.

Testimony in this case shows that there are there are significant dangers of permitting noise limits based on averaging because averaging allows sounds to enter into dangerous levels and still meet the average. Experts in this case agree that sound levels should be below 30 Db in the bedroom at night to protect against negative health impacts. However, the goal of protecting people's health is not met where a sound limit is averaged over time as it allows for significant

times of high noise that can disturb sleep. The standard that the Board has used in previous CPGs has not been proven to be protective.

The Board should impose a standard that offers full protection to residents: 30 decibels in the bedroom, measured by the window closest to the turbines, averaged over times shorter than one hour, and no more than 35- 40 decibels on the exterior of the home averaged over no more than one hour. The Board's prior standard of 45 is not protective enough of health.

The effects of low frequency sound from wind turbines are just beginning to be understood. This urges that caution be used in addressing this issue. Standards need to be set and once set protocol for monitoring and compliance need to be established, keeping in mind that there may be no effective mitigation for low frequency sound. It may be wise to try a different standard in this case that sets, not only an average but a maximum allowed sound for both day and night, as well as one that addresses low frequency sound. In this way we will learn more about what sound levels are truly protective of human health.

The Board should impose setbacks that protect the public from health impacts of noise and from safety issues such as ice throw and turbine collapse. GMP should not be permitted to use non-consenting landowners' land as their buffers.

THE PROPOSED PROJECT WILL CAUSE AN UNDUE ADVERSE IMPACT ON THE  
VALUE OF NEARBY PROPERTIES

FINDINGS OF FACT:

*Property Values:*

1. Contrary to the assertions made by GMP's real estate expert, credible literature has shown that 25% to 40% of a home's value can be lost due to the proximity of Industrial Wind Turbines, with some instances of total loss. (Ex Day 8, p 5 #4)
2. Based on recommendation from DPS's aesthetic consultant, Mark Kane, I selected residential structures located within a three-mile radius, as these properties may be impacted by the project. This data showed 371 residential structures spread across four